



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,373	07/07/2003	Atsushi Kato	075834.00411	7415
33448	7590	06/26/2007		
ROBERT J. DEPKE LEWIS T. STEADMAN ROCKEY, DEPKE, LYONS AND KITZINGER, LLC SUITE 5450 SEARS TOWER CHICAGO, IL 60606-6306			EXAMINER BERNATZ, KEVIN M	
			ART UNIT 1773	PAPER NUMBER
			MAIL DATE 06/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/614,373

Applicant(s)

KATO, ATSUSHI

Examiner

Kevin M. Bernatz

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 11-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. Amendments to claim 1 and addition of new claims 11 - 16, filed on March 23, 2007, have been entered in the above-identified application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1 and 11 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. (U.S. Patent No. 5,451,464) or Murayama (U.S. Patent No. 5,972,515) in view of Kato (U.S. Patent No. 6,114,057) and Kato (JP 2002-025035 A) as evidenced by Hashimoto et al. (U.S. Patent No. 5,458,979) and/or Applicants' admissions.

Abe et al. or Murayama et al. in view of Kato ('057) and Kato (JP '035) are relied upon for the reasons of record as set forth in Paragraph No. 6 of the Office Action mailed on January 8, 2007, which refers back to Paragraph No. 3 of the Office Action mailed June 20, 2006.

Regarding the combination of Abe et al. and/or Murayama et al. with the Kato references, the Examiner notes that it is known in the art that vinyl chloride (i.e. 'halogen' based resins) are to be avoided since they cause HCL formation and head contamination (*Hashimoto et al.*, col. 5, lines 5 – 6; and *Applicants' admissions*, Paragraph 0017). As such, the Examiner deems that the combination of the references for the purposes relied upon (i.e. optimization of the properties of the polyurethane

Art Unit: 1773

resins, only) is within the knowledge of one of ordinary skill in the art, since one of ordinary skill in the art would readily appreciate that the combined teachings should still avoid the use of halogen based resins due to the increase in head contamination resulting from such resins.

Regarding new claims 11 – 14, the Examiner notes that these limitations are met for the reasons cited above (i.e. all the limitations in claims 11 – 14 were present in original claim 1).

Regarding new claims 15 and 16, Murayama et al. teach that it is known in the art that the amount of OH groups per molecule (i.e. the “OH value”) can be varied to effect the strength of the coating film and the dispersion property in a polyurethane resin (*col. 5, lines 7 - 14*). Therefore, the Examiner deems that it would have been obvious to one having ordinary skill in the art to determine an amount of the OH value (i.e. the amount of OH groups per molecule) meeting Applicants’ claimed range limitations by optimizing the results effective variable through routine experimentation. *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Geisler*, 116 F. 3d 1465, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); *In re Aller*, 220 F.2d, 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Response to Arguments

4. The rejection of claims 1 and 11 - 16 under 35 U.S.C § 103(a) – Various references

Applicant(s) arguments have been considered but are moot in view of the new ground(s) of rejection. In so far as they apply to the present rejection of record,

Art Unit: 1773

applicant(s) argue that Kato '035 teaches away from the combination relied upon by the Examiner. The Examiner respectfully disagrees.

As noted by the evidentiary art cited above, it is known in the art that the use of vinyl chloride resins are to be avoided due to the formation of HCL and, therefore, head contamination. The Examiner notes that Kato '057 teaches that vinyl based resins can be used as the secondary binder, but that non-vinyl based resins are preferred (*col. 7, line 55 bridging col. 8, line 12*). Given that the base references provide the structure (i.e. a dual polyurethane-based binder resin), Kato '057 and Kato '035 are merely relied upon for optimization of the properties of the *already taught polyurethane combination*.

Applicants further note that the Examiner has incorrectly referred to "terephthalic acid" in the Kato '057 reference. The Examiner appreciates Applicant noting this oversight and notes that the correct column + line citations are col. 3, line 62 bridging col. 4, line 7, where Kato '057 explicitly states "as the polyesters use din the present invention, phthalic acid-polyesters (phthalates) are effective".

Regarding Applicants' argument of unexpected results (*pages 6 – 8 of response*), the Examiner notes that said arguments are not found persuasive for the following reasons. First, the Examiner notes that Abe et al. appears to teach that the running stability of the recording medium is linked to using a polyurethane having a sufficiently high glass temperature (*col. 3, lines 57 – 65*). Second, Applicants have not compared against the closest prior art (i.e. the dual polyurethane resin systems of Abe et al. and/or Murayama et al.). Finally, Applicants' claims are broader than the scope shown in

Art Unit: 1773

Applicants' as-filed specification, which uses only an 8:10 or 10:10 ratio in parts-by-weight of the polyurethane resins (*Tables 4 – 8*).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

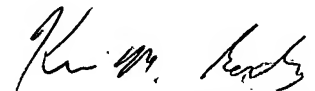
6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kevin M. Bernatz whose telephone number is (571) 272-1505. The Examiner can normally be reached on M-F, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1773

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMB
June 19, 2007


Kevin M. Bernatz, PhD
Primary Examiner